

REMARKS

The foregoing Amendment revises independent claims 1, 21 and 31, and depending claims 5-9, 20, 22-23, 26, 30, 34-35, 38-41 and 43; and cancels claims 25. Upon entry of the Amendment, the application contains claims 1-24 and 26-44 of which numbers 1, 21 and 31 are independent.

The Application Overcomes Examiner's Informal Objections

In response to the Examiner's objections concerning claims 6, 23 and 31 as noted in item 3 of the Examiner's Action, Applicant has amended claims 6, 23 and 31. In particular, the Applicant has deleted the term "at least one" in claim 6 to remove any perceived grammatical errors. Furthermore, the applicant has added terminating punctuation to claims 23 and 31.

In view of these claim amendments, Applicant requests reconsideration withdrawal of the Examiner's objections to claims 6, 23 and 31.

The Application Complies with 35 USC Section 112

In response to item 4 of the Examiner's Action, Applicant amends claims 5, 20, 22, 30, 38 and 43 to recite the invention with greater particularity. For instance, Applicant amends claims 5, 20, 22 and 30 herewith to remove any vague or indefinite terms. Additionally, Applicant amends claims 20, 30, 38 and 43 to correct the alleged errors in antecedent basis. Accordingly, the Applicant requests reconsideration and withdrawal of the rejections under 35 USC Section 112.

The Claimed Subject Matter is Patentable Over the Prior Art

Allowance of the claims is in order and requested because recitals in the claims as originally filed, and further recitals presented by the foregoing Amendment, differ from the disclosures in Woodall, U.S. Patent no. 6,329,725 and Le Cun, U.S. Patent no. 5,412,754. Neither the Woodall nor the Le Cun references teach, individually or in combination, an apparatus including an adaptive controller that directs a charge/discharge controller to transfer energy from a distributed power generator to the power grid or from the power grid to the apparatus, as recited in independent claims 1, 21 and 31.

The Claimed Subject Matter Differs from the Applied Art

Woodall discloses “systems and methods for delivering excess electric *power to an electric power grid from an marine transportation vessel* while said marine transportation vessel is at port”; See Woodall abstract and Summary of Invention, see also page 3 of Examiner’s 30 March 2004 Office Action. “A specific object of this invention is to provide systems and methods suitable for delivering the excess electric power available on a fluid fuel transportation vessel to an electric power grid during unloading operations, i.e., during delivery of fluid fuel to market”; See col. 2, lines 30-34 of Woodall.

The Applicant’s invention, as recited in independent claims 1, 21 and 31, provides for an apparatus and method that directs the transfer of energy *from a distributed power generator to the power grid or from the power grid to the apparatus*. The Woodall reference fails to teach or suggest a system that controls the transfer of energy in two directions, i.e. from the power grid to the apparatus OR from the apparatus to the power grid. Woodall only discloses that excess energy is transferred in one direction, from a marine vessel to the power grid.

Moreover, the Applicant’s claimed invention recites elements of the adaptive controller not disclosed in the applied Woodall reference. For instance, claims 1 and 31 of Applicant’s invention requires that a controller direct, “based upon a correlation between at least one parameter and a profile” whether the charge/discharge controller

should “transfer energy generated by the distributed power generator to the power grid or from the power grid to the apparatus”. Claim 21 of Applicant’s invention requires an “adaptive controller, including a neural network, that directs the charge/discharge controller”. As evidenced by the Examiner’s statements on page 4 of his Office Action, the Woodall reference clearly fails to teach these additional elements of the Applicant’s adaptive controller:

“Although Woodall et al. clearly provides for controlling delivery of distributed power generation to a power grid, *no specifics are provided for how the control is achieved.*” Examiner’s Action, page 4

In view of the foregoing, Applicant respectfully requests reconsideration and withdrawal of the Section 102 rejections of claims 1, 21 and 31, as well as all the claims that depend there from.

The Art Fails to Render the Claimed Subject Matter Obvious

Under item 8 of the Office Action, the Examiner rejects claims 15-20 and 25-30 as being allegedly obvious over the combined teaches of Woodall and Le Cun. For the reasons cited below, the Applicant respectfully requests that the Examiner reconsider and withdraw those objections, thereby passing this application on for allowance.

Woodall and Le Cun fail to disclose, individually or in combination, a system of the type recited in the pending claims. As stated above, Woodall fails to disclose a system that controls the transfer of energy in two directions, i.e. from the power grid to the apparatus OR from the apparatus to the power grid. Rather, the Woodall reference only discloses that the energy should be transferred from a marine vessel to the power grid.

The Le Cun reference fails to remedy the deficiencies in Woodall. The Le Cun reference discloses a reverse time delay neural network; See Le Cun Summary of Invention. The Le Cun patent states that “the principles of the present invention apply to time-series prediction such as for the control of power generation and

distribution and the prediction of power grid usage and loading”, See Le Cun, col. 10, lines 39-42. Clearly, Le Cun fails to teach or suggest a system capable of controlling the transfer of energy to or from the power grid, as recited in Applicant’s independent claims.

Moreover, neither of the applied references, alone or in combination, disclose an adaptive controller as recited in Applicant’s claims. For example, claims 1 and 31 of Applicant’s invention requires that the adaptive controller direct, “based upon a correlation between at least one parameter and a profile” whether the charge/discharge controller should “transfer energy generated by the distributed power generator to the power grid or from the power grid to the apparatus”. Claim 21 of Applicant’s invention requires an “adaptive controller, including a neural network, that directs the charge/discharge controller to transfer energy generated by the distributed power generator to the power grid or to transfer energy from the power grid to the apparatus”.

Neither the Woodall reference nor the Le Cun reference, individually or in combination, disclose an adaptive controller that controls *the direction of energy flow* based upon a correlation between at least one parameter and a profile, as recited in claims 1 and 31, or using a neural network, as recited in claim 21. Woodall does not provide for any specifics for how control is achieved (See page 4 of Examiner’s Action), and accordingly fails to provide for the claimed adaptive controller. Le Clun, arguably, suggests that a neural network can be used to control power generation, to control power distribution, to provide prediction of power grid usage, and to provide prediction of loading; See Le Clun, col. 10, lines 39-42. However, none of these apparent suggestions in Le Clun equate to controlling *the direction of energy flow* (i.e. to or from the power grid). Rather, Le Clun apparently uses the neural network to control the flow of energy in one direction or to provide predictions concerning usage and loading.

In view of the foregoing, Applicant requests withdrawal of the Section 103 rejections of claims 15-20 and 26-30.

CONCLUSION

This response attends to all issues raised in the Office Action dated March 30, 2004. Claims 1-24 and 26-44 overcome the Examiners objections under Section 112 and patentably distinguish from the art under Sections 102 and 103. Accordingly, Applicant requests that the application be passed to issue with claims 1-24 and 26-44, inclusive.

Respectfully submitted,

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I hereby certify that this Response to Office Action is being deposited with the United States Postal Service as First Class Mail, postage prepaid, in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313 on September 27, 2004

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